

Amendment

Status of All Claims in the Application:

1-6. (Canceled)

33
7. (Previously Presented) The disk drive of claim 54 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

8. (Previously Presented) The disk drive of claim 54 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

9. (Previously Presented) The disk drive of claim 54 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

10. (Previously Presented) The disk drive of claim 54 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

11. (Previously Presented) The disk drive of claim 54 wherein each layer is made of a metal.

12. (Previously Presented) The disk drive of claim 54 wherein the first layer is made of steel and the second layer is made of titanium.

13-17. (Canceled)

18. (Currently Amended) ~~The A disk drive of claim 17 wherein~~ comprising:

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a drive housing;

a storage disk coupled to the drive housing; and

a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster, the adjuster including a first layer and a second layer that is secured to the first layer, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer, the adjuster increases increasing the gram load that is applied to the slider as the temperature near the adjuster decreases.

19. (Original) The disk drive of claim 18 wherein the gram load increases at least approximately four percent for a twenty °C decrease in temperature.

20. (Original) The disk drive of claim 18 wherein the gram load increases at least approximately seven percent for a twenty °C decrease in temperature.

21. (Original) The disk drive of claim 18 wherein the adjuster decreases the gram load that is applied to the slider as the temperature near the adjuster increases.

22. (Currently Amended) The disk drive of claim [[17]] 88 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

23. (Currently Amended) The disk drive of claim [[17]] 88 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

24. (Currently Amended) The disk drive of claim [[17]] 88 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

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25. (Currently Amended) The disk drive of claim [[17]] 88 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

26. (Currently Amended) The disk drive of claim [[17]] 87 wherein each layer is made of a metal.

27. (Currently Amended) The disk drive of claim [[17]] 87 wherein the first layer is made of steel and the second layer is made of titanium.

28. (Currently Amended) The disk drive of claim [[17]] 86 wherein the head arm assembly includes a load beam and the adjuster is a part of the load beam.

29. (Currently Amended) ~~The A disk drive of claim 17 wherein the head arm assembly includes comprising:~~

a drive housing;

a storage disk coupled to the drive housing; and

a head arm assembly coupled to the drive housing, the head arm assembly including an arm beam having an adjuster and a slider coupled to the adjuster, the adjuster including a first layer and a second layer that is secured to the first layer, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer and the adjuster is a part of the arm beam.

30. (Original) A disk drive comprising:

a drive housing;

a storage disk coupled to the drive housing; and

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a head arm assembly coupled to the drive housing, the head arm assembly including an arm beam, a load beam coupled to the arm beam, and a slider coupled to the load beam, wherein at least one of the beams includes an adjuster that increases the gram load that is applied to the slider as the temperature near the adjuster decreases, the adjuster including a first layer and a second layer that is secured to the first layer, the first layer has a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

31. (Original) The disk drive of claim 30 wherein the gram load increases at least approximately four percent for a twenty °C decrease in temperature.

32. (Original) The disk drive of claim 30 wherein the gram load increases at least approximately seven percent for a twenty °C decrease in temperature.

33. (Original) The disk drive of claim 30 wherein the adjuster decreases the gram load that is applied to the slider as the temperature near the adjuster increases.

34. (Original) The disk drive of claim 30 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

35. (Original) The disk drive of claim 34 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

36. (Original) The disk drive of claim 34 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

37. (Original) The disk drive of claim 34 wherein the coefficient of thermal

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38. (Original) The disk drive of claim 30 wherein the first layer is made of steel and the second layer is made of titanium.

39-45. (Canceled)

46. (Currently Amended) The method of claim [[59]] 94 wherein the a coefficient of thermal expansion of the first layer is greater than the a coefficient of thermal expansion of the second layer.

47-53. (Canceled)

54. (Currently Amended) A disk drive comprising:
a drive housing;
a storage disk coupled to the drive housing; and
a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster; the adjuster including a first layer and a second layer ~~that is secured to the first layer~~, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer, the adjuster changing the gram load that is applied to the slider as the environmental temperature near the adjuster changes.

55. (Currently Amended) A disk drive comprising:
a drive housing;
a storage disk coupled to the drive housing; and

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a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster; the adjuster including a first layer and a second layer ~~that is secured to the first layer~~, the first layer having a modulus of elasticity that is different from a modulus of elasticity of the second layer, the adjuster changing the gram load that is applied to the slider as the environmental temperature near the adjuster changes.

56. (Currently Amended) A disk drive comprising:

a drive housing;

a storage disk coupled to the drive housing; and

a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster, the adjuster including a first layer and a second layer, the first layer having a different material composition than the second layer, the adjuster changing the gram load that is applied to the slider as the environmental temperature near the adjuster changes.

57-59. (Canceled)

60. (Previously Presented) A disk drive comprising:

a drive housing;

a drive circuitry; and

a head arm assembly coupled to the drive housing, the head arm assembly including (i) a load beam that is electrically isolated from the drive circuitry, (ii) a slider that is connected to the drive circuitry, the slider being supported by the load beam, and (iii) an adjuster that is coupled to the load beam, the adjuster adjusting the gram load applied to the slider based on the temperature of the adjuster.

61. (Previously Presented) The disk drive of claim 60 wherein the adjuster increases the gram load that is applied to the slider as the temperature near the

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adjuster decreases.

62. (Previously Presented) The disk drive of claim 60 wherein the adjuster decreases the gram load that is applied to the slider as the temperature near the adjuster increases.

63. (Currently Amended) The disk drive of claim 60 wherein adjuster includes a first layer and a second layer ~~that is secured to the first layer, wherein~~ the first layer ~~has~~ having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

64. (Previously Presented) The disk drive of claim 63 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

65. (Previously Presented) The disk drive of claim 63 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

66. (Previously Presented) The disk drive of claim 63 wherein each layer is made of a different composition of metal.

67. (Canceled)

68. (Currently Amended) The disk drive of claim 60 wherein the adjuster includes a first layer and a second layer ~~that is secured to the first layer, wherein~~ the first layer ~~has~~ having a modulus of elasticity that is different from a modulus of elasticity of the second layer.

69. (Previously Presented) The disk drive of claim 60 wherein the adjuster is directly secured to the load beam.

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70. (Previously Presented) The disk drive of claim 60 wherein the adjuster is incorporated as part of the load beam.

71. (Previously Presented) The disk drive of claim 60 wherein the head arm assembly includes an arm beam and the adjuster is incorporated as part of the arm beam.

72. (Previously Presented) The disk drive of claim 71 wherein the head arm assembly includes a second adjuster that is incorporated as part of the load beam.

73. (Previously Presented) The disk drive of claim 60 wherein the adjuster includes a first layer and a second layer, wherein the first layer has a different material composition than the second layer.

74. (Previously Presented) A method for maintaining a slider within a desired flying height range as temperature changes within a disk drive, the method comprising the steps of:

coupling the slider to a load beam that is electrically isolated from a drive circuitry; and

adjusting the gram load applied to the slider with an adjuster that moves based on the temperature of the adjuster so that the slider is maintained within the desired flying height range.

75. (Previously Presented) The method of claim 74 wherein the step of adjusting includes the step of increasing the gram load that is applied to the slider as the temperature of the adjuster decreases.

76. (Previously Presented) The method of claim 74 wherein the step of adjusting includes the step of decreasing the gram load that is applied to the slider as the temperature of the adjuster increases.

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77. (Previously Presented) The method of claim 74 wherein the step of adjusting the gram load includes the step of coupling the adjuster to the slider.

78. (Currently Amended) The method of claim 74 wherein the step of adjusting includes providing an adjuster having a first layer and a second layer ~~that is secured to the first layer~~, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

79. (Previously Presented) The method of claim 78 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

80. (Previously Presented) The method of claim 79 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

81. (Previously Presented) The method of claim 78 wherein each layer is made of a metal.

82. (Previously Presented) The method of claim 78 wherein the first layer is made of steel and the second layer is made of titanium.

83. (Previously Presented) The method of claim 74 wherein the step of adjusting includes incorporating the adjuster as part of the load beam.

84. (Previously Presented) The method of claim 74 wherein the step of adjusting includes incorporating the adjuster as part of an arm beam.

85. (Previously Presented) The method of claim 84 wherein the step of adjusting includes incorporating a second adjuster as part of the load beam.

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86. (New) A disk drive comprising:

a drive housing;

a drive circuitry; and

a head arm assembly coupled to the drive housing, the head arm assembly including (i) a slider that is connected to the drive circuitry, and (ii) an adjuster that is coupled to the slider, the adjuster being electrically isolated from the drive circuitry, the adjuster dynamically adjusting the gram load applied to the slider based on the environmental temperature near the adjuster.

87. (New) The disk drive of claim 86 wherein the adjuster includes a first layer formed from a first material, and a second layer formed from a second material that is different than the first material.

88. (New) The disk drive of claim 87 wherein the first layer and the second layer have different coefficients of thermal expansion.

89. (New) The disk drive of claim 87 wherein the first layer has a modulus of elasticity that is different than a modulus of elasticity of the second layer.

90. (New) The disk drive of claim 86 wherein the gram load increases at least approximately four percent for a twenty °C decrease in temperature of the adjuster.

91. (New) The disk drive of claim 86 wherein the head arm assembly includes an arm beam and the adjuster is incorporated as part of the arm beam.

92. (New) The disk drive of claim 91 wherein the head arm assembly includes a second adjuster that is incorporated as part of the load beam.

93. (New) A method for maintaining a slider of a disk drive within a desired flying height range as temperature within the disk drive changes, the method comprising

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the steps of:

coupling the slider to an adjuster, the adjuster being electrically isolated from a drive circuitry of the disk drive; and

dynamically adjusting the gram load applied to the slider based on the environmental temperature near the adjuster so that the slider is maintained within the desired flying height range.

94. (New) The method of claim 93 wherein the step of coupling the slider to an adjuster includes providing an adjuster having a first layer and a second layer that is formed from a material that is different than a material used to form the first layer.

95. (New) The method of claim 93 further comprising the step of incorporating the adjuster as part of a load beam of the disk drive.

96. (New) The method of claim 93 further comprising the step of incorporating the adjuster as part of an arm beam of the disk drive.

97. (New) The method of claim 96 further comprising the step of adjusting the gram load applied to the slider with a second adjuster that is incorporated as part of a load beam of the disk drive.
